

AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double brackets indicating deletions.

LISTING OF CLAIMS

1. (Currently Amended) A computer-implemented method of generating a graphical portion of a graphical user interface (GUI), the method including computer-implemented steps comprising:

illustrating, in the same graphical portion, a tree hierarchy and a table of values; including, in the tree hierarchy, one or more nodes belonging to a first node-category and one or more nodes belonging to a second node-category and corresponding to a group of elements;

adaptively arranging the table, in response to a selection of one of the first-category nodes via the GUI, to include one or more rows that present information about the one or more second-category nodes, respectively, and that report to the selected one of the first-category nodes, and ~~one~~two or more columns representing a ~~parameter~~parameters of the one or more ~~the~~second-category nodes, respectively; and

showing, in the rows, sums of individual values exhibited by elements of the group, respectively.

2. (Original) The method of claim 1, the method further comprising: including, in the tree hierarchy, at least one node belonging to a third node-category; wherein the one or more first-category nodes report to the at-least-one third-category node, respectively.

3. (Previously Presented) The method of claim 1, wherein: the elements in the tree hierarchy represent a component in a storage domain.
4. (Previously Presented) The method of claim 3, wherein at least one instance of the parameter of the storage-domain component includes at least one of the following: a number of LUNs to which the element has access; an amount of storage space made available to the element; or a cost per unit time of an amount of storage made available to the element.
5. (Original) The method of claim 4, wherein: one of the one-or-more columns represents the storage-space-amount parameter; the at-least-one row associated via the at-least-one second-category node with the respective group of elements shows in a cell intersecting the storage-space-amount-parameter column a sum of the storage space represented by the elements of the group.
6. (Original) The method of claim 1, further comprising: splitting the graphical portion into a first pane and a second pane; the first pane containing the tree hierarchy; and the second pane containing the table.
7. (Original) The method of claim 1, wherein: the rows of the table are a first type of row; and the method further comprises including in the table a second type of row that presents information about the selected one of the first-category nodes.
8. (Original) The method of claim 7, wherein: the second-type row has a cell corresponding to each of the one or more columns, respectively; and the method further comprises showing, for each of the one-or-more cells of the second-type row, a sum of the values in the corresponding cells of the first-type rows.

9. (Original) The method of claim 1, further comprising: illustrating a title for the table, the title being an at least partial pathname to the selected one of the first-category nodes, the pathname including at least an identifier of a third level node to which the selected one of the first-category nodes reports.

10. (Original) The method of claim 1, further comprising: including, in the tree hierarchy, a node belonging to a third node-category, the first-category nodes reporting to the third-category node; wherein the tree hierarchy concerns various-type components of a storage domain, the third-category node represents the total instances of a particular type among the storage-domain components, and each of the second-category nodes represents a subset of the total instances of the particular type of storage-domain component.

11. (Original) The method of claim 1, wherein the table is formed of multiple tabbed subtables.

12. (Currently Amended) A method of generating a graphical portion of a graphical user interface (GUI), the graphical portion concerning various components of a storage domain, the method comprising:

illustrating a tree hierarchy; including, in the tree hierarchy, a node at least two nodes belonging to a first node-category, the first-category node representing the total instances of a particular type among the storage-domain components, the at least two nodes representing at least two different ones from among the following types of storage domain components including a storage area network (SAN), an interconnect device, a storage device, a host, or a business application; and

including, in the tree hierarchy, one or more subset nodes belonging to a second node-category reporting to the first-category node, each second-category subset node

representing a subset of the total instances of the particular type of storage-domain component.

13. (Cancel) The method of claim 12, wherein the type of storage-domain component is one of the following: a storage area network (SAN); an interconnect device; a storage device; a host; or a business application.

14. (Original) The method of claim 12, further comprising: illustrating, in the tree hierarchy, one or more instance nodes belonging to the second node-category that reports to the first-category node, each second-category instance node representing a particular instance among the total instances of the particular type of storage-domain component.

15. (Original) The method of claim 12, further comprising: illustrating, in the tree hierarchy, one or more instance nodes belonging to a third node-category reporting to the second-category subset nodes, respectively, each third-category instance node representing a particular instance among the subset of instances of the corresponding second-category subset node.

16. (Original) The method of claim 12, further comprising: illustrating, in the tree hierarchy, a node a third node-category corresponding to the storage-domain as a whole, each first-category node reporting to the third-category node.

17. (Currently Amended) A machine-readable medium including instructions execution of which by a host produces a graphical portion of a graphical user interface (GUI), the machine-readable instructions comprising:

a code segment for illustrating, in the same graphical portion, a tree hierarchy and a table of values;

a code segment for including, in the tree hierarchy, one or more nodes belonging to a first node-category and one or more nodes belonging to a second node-category and corresponding to a group of elements;

a code segment for adaptively arranging the table, in response to a selection of one of the first-category nodes via the GUI, to include one or more rows that present information about the one or more second-category nodes, respectively, and that report to the selected one of the first-category nodes, and one-two or more columns representing ~~a parameter~~parameters of ~~the~~ one or more ~~the~~second-category nodes, respectively; and

a code segment for showing, in the rows, sums of individual values exhibited by elements of the group, respectively.

18. (Original) The machine-readable instructions of claim 17, the machine-readable instructions further comprising: a code segment for including, in the tree hierarchy, at least one node belonging to a third node-category; wherein the one or more first-category nodes report to the at-least-one third-category node, respectively.

19. (Previously Presented) The machine-readable instructions of claim 17, wherein: the elements in the tree hierarchy represent a component in a storage domain.

20. (Previously Presented) The machine-readable instructions of claim 19, wherein at least one instance of the parameter of the storage-domain component includes at least one of the following: a number of LUNs to which the element has access; an amount of storage space made available to the element; or a cost per unit time of an amount of storage made available to the element.

21. (Original) The machine-readable instructions of claim 20, wherein: one of the one-or-more columns represents the storage-space-amount parameter; the at-least-one

row associated via the at-least-one second-category node with the respective group of elements shows in a cell intersecting the storage-space-amount-parameter column a sum of the storage space represented by the elements of the group.

22. (Original) The machine-readable instructions of claim 17, further comprising: a code segment for splitting the graphical portion into a first pane and a second pane; the first pane containing the tree hierarchy; and the second pane containing the table.

23. (Original) The machine-readable instructions of claim 17, wherein: the rows of the table are a first type of row; and the machine-readable instructions further comprise a code segment for including in the table a second type of row that presents information about the selected one of the first-category nodes.

24. (Original) The machine-readable instructions of claim 23, wherein: the second-type row has a cell corresponding to each of the one or more columns, respectively; and the machine-readable instructions further comprise a code segment for showing, for each of the one-or-more cells of the second-type row, a sum of the values in the corresponding cells of the first-type rows.

25. (Original) The machine-readable instructions of claim 17, further comprising: a code segment for illustrating a title for the table, the title being an at least partial pathname to the selected one of the first-category nodes, the pathname including at least an identifier of a third level node to which the selected one of the first-category nodes reports.

26. (Original) The machine-readable instructions of claim 17, further comprising: a code segment for including, in the tree hierarchy, a node belonging to a third node-category, the first-category nodes reporting to the third-category node; wherein the

tree hierarchy concerns various-type components of a storage domain, the third-category node represents the total instances of a particular type among the storage-domain components, and each of the second-category nodes represents a subset of the total instances of the particular type of storage-domain component.

27. (Original) The machine-readable instructions of claim 17, wherein the table is formed of multiple tabbed subtables.

28. (Currently Amended) A machine-readable medium including instructions execution of which by a host produces a graphical portion of a graphical user interface (GUI), the graphical portion concerning various components of a storage domain, the machine-readable instructions comprising:

a code segment for illustrating a tree hierarchy;

a code segment for including, in the tree hierarchy, a node at least two nodes belonging to a first node-category, the first-category node representing the total instances of a particular type among the storage-domain components, the at least two nodes representing at least two different ones from among the following types of storage domain components including a storage area network (SAN), an interconnect device, a storage device, a host, or a business application; and

a code segment for including, in the tree hierarchy, one or more subset nodes belonging to a second node-category reporting to the first-category node, each second-category subset node representing a subset of the total instances of the particular type of storage-domain component.

29. (Cancel) ~~The machine readable instructions of claim 28, wherein the type of storage domain component is one of the following: a storage area network (SAN); an interconnect device; a storage device; a host; and a business application.~~

30. (Original) The machine-readable instructions of claim 28, further comprising: a code segment for illustrating, in the tree hierarchy, one or more instance nodes belonging to the second node-category that reports to the first-category node, each second-category instance node representing a particular instance among the total instances of the particular type of storage-domain component.

31. (Original) The machine-readable instructions of claim 28, further comprising: a code segment for illustrating, in the tree hierarchy, one or more instance nodes belonging to a third node-category reporting to the second-category subset nodes, respectively, each third-category instance node representing a particular instance among the subset of instances of the corresponding second-category subset node.

32. (Original) The machine-readable instructions of claim 28, further comprising: a code segment for illustrating, in the tree hierarchy, a node a third node-category corresponding to the storage-domain as a whole, each first-category node reporting to the third-category node.

33. (Currently Amended) An apparatus for managing components of a system, the apparatus comprising:

a host operatively connected to the components of system;

manager means for running on the host and for managing the components of the system in part by producing a graphical user interface (GUI); and

generation means for generating a graphical portion of the GUI, the generation means being operable to do at least the following

portray, in the same graphical portion, a tree hierarchy and a table of values,

portray, in the tree hierarchy, one or more nodes belonging to a first node-category and one or more nodes belonging to a second node-category and corresponding to a group of elements,

adaptively dispose the table, in response to a selection of one of the first-category nodes via the GUI,

include one or more rows that present information about the one or more second-category nodes, respectively, and that report to the selected one of the first-category nodes, and ~~one~~~~two~~ or more columns representing ~~a parameter~~~~parameters~~ of ~~the~~ one or more the second-category nodes, respectively; and

portray, in the rows, sums of individual values exhibited by elements of the group, respectively.

34. (Previously Presented) The apparatus of claim 33, wherein: the system is a storage domain and the elements in the tree hierarchy represent a component in a storage domain.

35. (Original) The apparatus of claim 34, wherein a parameter of the storage-domain component includes one of the following: a number of LUNs to which the element has access; an amount of storage space made available to the element; and a cost per unit time of an amount of storage made available to the element.

36. (Original) The apparatus of claim 35, wherein: one of the one-or-more columns represents the storage-space-amount parameter; and the at-least-one row associated via the at-least-one second-category node with the respective group of elements shows in a cell intersecting the storage-space-amount-parameter column a sum of the storage space represented by the elements of the group.

37. (Original) The apparatus of claim 33, wherein: the rows of the table are a first type of row; and the generation means is further operable to dispose, in the table, a second type of row that presents information about the selected one of the first-category nodes.

38. (Original) The apparatus of claim 37, wherein: the second-type row has a cell corresponding to each of the one or more columns, respectively; and the generation means is further operable to dispose, for each of the one-or-more cells of the second-type row, a sum of the values in the corresponding cells of the first-type rows.

39. (Currently Amended) An apparatus for managing components of a storage domain, the apparatus comprising:

a host operatively connected to the components of the storage domain;

storage area manager (SAM) means for running on the host and for managing the components of the storage domain in part by producing a graphical user interface (GUI); and

generation means for generating a graphical portion of the GUI, the graphical portion concerning various components of a storage domain, the generation means being operable to at least to do the following,

portray a tree hierarchy; portray, in the tree hierarchy, a node-at least two nodes belonging to a first node-category, the first-category node representing the total instances of a particular type among the storage-domain components, the at least two nodes representing at least two different ones from among the following types of storage domain components including a storage area network (SAN), an interconnect device, a storage device, a host, or a business application, and

portray, in the tree hierarchy, one or more subset nodes belonging to a second node-category reporting to the first-category node, each second-category

subset node representing a subset of the total instances of the particular type of storage-domain component.

40. (Cancel) ~~The apparatus of claim 39, wherein the type of storage-domain component is one of the following: a storage area network (SAN); an interconnect device; a storage device; a host; or a business application.~~

41. (Original) The apparatus of claim 39, wherein the generation means is further operable to dispose, in the tree hierarchy, one or more instance nodes belonging to the second node-category that reports to the first-category node, each second-category instance node representing a particular instance among the total instances of the particular type of storage-domain component.

42. (Original) The apparatus of claim 39, wherein the generation means is further operable to dispose one or more instance nodes belonging to a third node-category reporting to the second-category subset nodes, respectively, each third-category instance node representing a particular instance among the subset of instances of the corresponding second-category subset node.

43. (Original) The apparatus of claim 39, wherein the generation means is further operable to dispose a node a third node-category corresponding to the storage-domain as a whole, each first-category node reporting to the third-category node.

44. (Currently Amended) A method of generating a graphical portion of a graphical user interface (GUI), the method comprising:

illustrating, in the same graphical portion, a tree hierarchy and a constellation of values;

including, in the tree hierarchy, one or more nodes belonging to a first node-category and one or more nodes belonging to a second node-category and corresponding to a group of elements;

adaptively arranging the constellation, in response to a selection of one of the first-category nodes via the GUI, to include regions that present information about the one or more second-category nodes, respectively, and that report to the selected one of the first-category nodes, and the regions being organized in terms of ~~one-two~~ or more parameters of the one-or-more of the second-category nodes, respectively; and

showing, in the regions, sums of individual values exhibited by elements of the group, respectively.

45. (Original) The method of claim 44, wherein the regions define the constellation as a table in which: one or more rows present information about the one or more second-category nodes, respectively, that report to the selected one of the first-category nodes; and the one or more parameters are represented via one or more columns, respectively; and the sums of individual values for the one or more parameters exhibited by elements of the group, respectively, are shown in the rows.

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